## Scientific Note

## LALAPA LUSA PATE (HYMENOPTERA: TIPHIIDAE): NEW LOCALITIES AND NEW FLORAL ASSOCIATIONS IN THE PACIFIC NORTHWEST

Lalapa lusa Pate (Hymenoptera: Tiphiidae) is a distinctive wasp and the sole North American representative of the subfamily Anthoboscinae. As such, it has attracted the attention of aculeate Hymenoptera workers. Lalapa lusa is known from Idaho, Washington, Oregon and California (Krombein, K. V. 1979. Cat. Hymen. Amer. N of Mex., 2: 1268) where it occurs in arid and semiarid regions. Yet, it remains rare in collections and its biology is unknown.

The only previous Idaho record was a single female collected at Hollister, on 21 Aug 1930, which was designated as the holotype (Pate, V. S. L. 1947. J. N.Y. Entomol. Soc., 55: 115–145). There were two previously known collections of *L. lusa* from Washington: at Whiskey Dick Canyon, (M. Wasbauer, personal communication), and at Burke, which came from the M. T. James Collection, Department of Entomology, Washington State University.

We collected twelve additional specimens of L. lusa from Idaho and Washington (see records). Collections were made by sweeping low vegetation, the blossoms of rabbitbrush,  $Chrysothamnus\ nauseosus$  (Pallas) Britton (Asteraceae), and Canada thistle,  $Cirsium\ arvense$  (L.) Scopoli (Asteraceae). Specimens were also obtained from flowers of white sweet clover,  $Melilotus\ alba$  Desrousseaux (Fabaceae), and from yellow pan traps.

All four floral associations for *L. lusa* are new. *Lalapa lusa* was previously known wild buckwheat flowers, *Eriogonum* sp. (Polygonaceae), in Riverside Co., California, and feeding on the exudate of *Disholcaspis* sp. galls (Hymenoptera: Cynipidae) on oak, *Quercus* sp. (Fagaceae) (M. Wasbauer, personal communication).

Lalapa lusa are 6-7 mm long, mostly matte black with a red apex of the abdomen. The body is largely covered with long, white to tan setae that are particularly dense on the apical abdominal segments. These characters allow discrimination of L. lusa from most other tiphiids in the field. This is important because it was found sharing inflorescences of Canada thistle and white sweet clover with a far more abundant Paratiphia sp. (prob. neomexicana Cameron) (Hymenoptera: Tiphiidae). Under the microscope Lalapa lusa can be distinguished from other tiphiids by examining the middle and hind tibiae which are flattened and bear several rows of short, thick, blunt, peg-like tubercles. The wasps are active from mid summer to early fall. Pan trap collections indicate that they spend a good deal of time flying low over the ground, as would be typical for a fossorial wasp. Thus, pan traps or flight intercept traps may be the best means of sampling for L. lusa. Subsequent observations in the area may then reveal biological secrets of another fascinating wasp and yield data important to our understanding of the Tiphioidea.

Records. - IDAHO. NEZ PERCE Co.: Hatwai Crk, 8 km (5 mi) E of Lewiston, 31 Jul 1984, W. J.

Turner, Chrysothamnus nauseosus (Pallas) Britton (Rabbitbrush, Asteraceae) (1); Hell's Gate State Park, 6.4 km (4 mi) E of Lewiston, 14 Jul 1982, T. D. Miller, Cirsium arvense (L.) Scopoli (Canada thistle, Asteraceae) (1); same loc., but 28 Jul 1982, J. B. Johnson, sweeping low vegetation, (1); same, but 14 Jul 1983, Melilotus alba Desrousseaux flowers (white sweet clover, Fabaceae) (2); same, but 22 Aug/6 Sep 1984, T. D. Miller, yellow pan trap (3); same, but 10/20 Aug 1985 (2). OWYHEE Co.: Murphy, 18 Jul 1982, J. B. Johnson, sweeping low vegetation (1). TWIN FALLS Co.: Hollister, 21 Aug 1930 (holotype). WASHINGTON. BENTON Co.: 8 km (5 mi) N of Richmond, 2 Oct 1982, J. B. Johnson, sweeping low vegetation (1). GRANT Co.: Burke, 9 Aug 1950, E. Klostermeyer, sweeping Salsola kali L. (Russian thistle, Chenopodiaceae). KITTITAS Co.: Whiskey Dick Cyn, 12.8 km (8 mi) N of Vantage.

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## NEW RECORDS OF TRICHOSTERESIS FOERSTER FROM THE WESTERN UNITED STATES (HYMENOPTERA: MEGASPILIDAE)

Only two species of *Trichosteresis* Foerster are recorded from North America—*T. floridana* Ashmead from Jacksonville, Florida, and *T. vitripennis* Whittaker from Chilliwack, British Columbia (Muesebeck, C. F. W. 1979. Catalog of Hymenoptera of North America: 1191). Their hosts are not known, but European species have been reared from syrphid pupae. However Dessart (Dessart, P. 1974. Ann. Soc. Entomol. Fr., (N.S.) 10:395–448) believes *Trichosteresis* is monotypic, and all other species, are synonyms of *T. glabra* (Boheman).

In 1993, I found *T. vitripennis* in two widely-separated locations in California, suggesting that it occurs throughout the state. In April, I collected a female on the roof of my car that had just come through a car wash in the City of San Bernardino (see records). In June, I swept two females from the foliage of *Quercus agrifolia* Nee near the North Oakland Sports Center in Oakland. Determinations were made using a generic key to world Ceraphronoidea (Alekseyev, V. N. 1978. Entom. Rev., 57: 449–453) and the species description (Whittaker, O. 1930. Proc. Entom. Soc. Wash., 32: 72–73); no comparisons with the types were made. These discoveries caused me to reexamine the material in the Essig Museum, where I found four additional *Trichosteresis* specimens. One was a *T. vitripennis* female, which I had swept from *Medicago sativa* L. at U.C. Berkeley's experiment station in Albany. The other three were females that did not match the descriptions of either *T. floridana* or *T. vitripennis*; these were collected at the Needle Rocks at the north end of Pyramid Lake, Nevada (collector unknown).